OPINION

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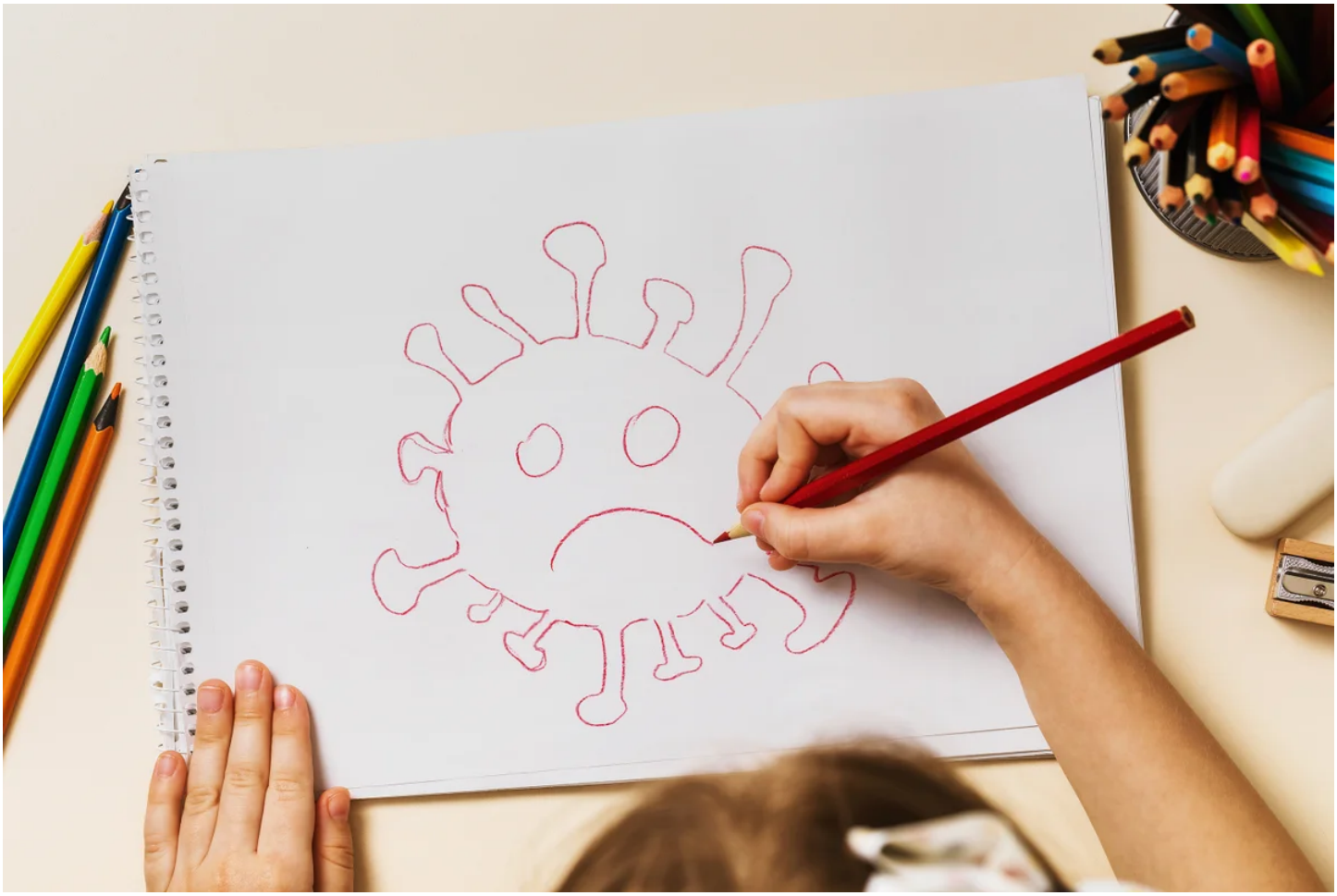
Long COVID Is Harming Too Many Kids

Pediatric long COVID is more common than many thought, and we keep letting kids be reinfected with new variants

BY BLAKE MURDOCH



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Pediatrics Opinion

Since the COVID pandemic began, claims that the disease poses only minimal risk to children have spread widely, on the presumption that the lower rate of severe acute illness in kids tells the whole story. Notions that children are nearly immune to COVID and don't need to be vaccinated have pervaded.

These ideas are wrong. People making such claims ignore the accumulating risk of long COVID, the constellation of long-term health effects caused by infection, in children who may get infected once or twice a year. The condition may already have affected nearly six million kids in the U.S. Children need us to wake up to this serious threat. If we do, we can help our kids with a few straightforward and effective measures.

The spread of the mistaken idea that children have nothing to worry about has had some help from scientists. In 2023 the American Medical Association's pediatrics journal published a study–which has since been retracted—reporting the rate of long COVID symptoms in kids was "strikingly low" at only 0.4 percent. The results were widely publicized as feel-good news, and helped rationalize the status quo, where kids are repeatedly exposed to SARS-COV-2 in underventilated schools and parents believe they will suffer no serious harm.

In January 2024, however, two scientists published a letter with me explaining why that study was invalid. Some of the errors made it hard to understand how the study survived peer review. For example, the authors claimed to report on long COVID using the 2021 World Health Organization definition, but didn't properly account for the possibility of new onset and fluctuating or relapsing symptoms, even though that definition and the subsequently released 2023 pediatric one emphasize those attributes. Any child with four symptom-free weeks—even nonconsecutive ones—following confirmed infection was categorized by the study authors as not having long COVID.

In August, the authors of the study retracted it. They did not admit to the errors we raised. But they did admit to new errors, and said these mistakes meant they understated the rate of affected children.

And that rate, according to other research, is quite high. The American Medical Association's top journal, *JAMA,* in August published a key new study and editorial about pediatric long COVID. The editorial cites several robust analyses and concludes that, while uncertainty remains, long COVID symptoms appear to occur after about 10 percent to 20 percent of pediatric infections.

If you're keeping score, that's as many as 5.8 million affected children in the U.S.—so far. And we know studies and surveys of adults have found that repeat infections heighten the risk of long-term consequences.

The *JAMA* study comparing infected and uninfected children found that trouble with memory or focusing is the most common long COVID symptom in kids aged six to 11. Back, neck, stomach and head pain were the next most common symptoms. Other behavioral impacts included "fear about specific things" and refusal to go to school.

Adolescents aged 12 to 17 reported different leading symptoms. Change or loss in smell or taste was most common, followed by body pains, daytime tiredness, low energy, tiredness after walking and cognitive deficits. The study noted that symptoms "affected almost every organ system." In other words, these symptoms reflect real physiological trauma. For example, SARS-COV-2 can cause or mediate cardiovascular, neurological and immunological harm, even increasing the relative risk of new onset pediatric diabetes when compared with other lesser infections.

Children in schools today are often described as struggling with emotional regulation, attention deficits and developmental problems. Adolescents have some of the worst standardized test scores in decades. Pandemic measures such as school closures—most of which were short-lived and occurred several years ago—have been blamed almost entirely for children's present-day behavioral and learning problems.

While it is clear these early pandemic disruptions negatively impacted many children, the unproven notion that "the cure was worse than the disease" has become dogma and sometimes involves reimagining history. For example, the Canadian Pediatric Society's most recent COVID vaccination guidance fails to even acknowledge the existence of pediatric long COVID, while stating without evidence in its preamble that children were more affected by pandemic disruptions in activities than direct viral effects. It's hard to imagine how this wording could encourage pediatricians and parents to vaccinate children against a disabling virus.

Consider also a small but widely publicized Bezos Family Foundation–funded study which unscientifically claimed accelerated cortical thinning, a type of brain restructuring that occurs over time, is caused by "lockdowns." The study design could not demonstrate cause and effect, however, but only correlation. Pediatric brain experts have critiqued the research, pointing out that "no supporting evidence" was provided for the claim cortical thinning is from social isolation, and that it isn't necessarily pathological. "Lockdowns" were neither defined nor controlled for in the study, which relied on 54 pandemic-era brains scans from different children than the prepandemic scans they were compared to—meaning there was no measurement of brain changes in specific individuals. The pandemic-era scans came from months when relevant CDC seroprevalence data estimate that the number of children with one or more infections rose from about one in five to around three in five. We might reasonably predict that many of the studied brain scans were therefore from children who recently had COVID.

It is understandably disturbing to entertain the idea that we might currently be recklessly allowing millions of children to be harmed by preventable disease. That may be part of why problematic studies such as these have gotten headlines. It is more disturbing, however, that almost no public attention has been given to infection itself as a potential cause of children's behavioural and learning problems.

This makes no sense. We know that COVID harms the brain. Neuroinflammation, brain shrinkage, disruption of the blood-brain barrier and more have been documented in adults, as have cognitive deficits. These deficits have been measured as equivalent to persistent decreased IQ scores, even for mild and resolved infections. Millions of people have, or have experienced, "brain fog." What, then, do we guess a child's COVID-induced "trouble with focusing or memory" might be?

When you put together the estimate that 10 to 20 percent of infected kids may experience long-term symptoms, that many of the most common symptoms affect cognition, energy levels and behavior, and that children are being periodically reinfected, you have a scientific rationale to partly explain children's widely reported behavioural and learning challenges.

We can do something to protect our kids. We can vaccinate them every season, which somewhat reduces the risk of long COVID. We can keep sick children home by passing laws that create paid sick leave and end attendance-based school funding. We can normalize rather than vilify the use of respirator masks that help prevent the spread of airborne diseases.

Finally, we can implement fantastic new engineered indoor air quality standards designed to greatly reduce the spread of germs. Clean indoor air should be expected as a right, like clean water. The cost of providing cleaner indoor air is low relative to the economic benefits, which even when conservatively modeled are in the tens of billions annually in the U.S. and more than ten times the costs. These costs are also small compared to the price children and their families would pay in suffering as a result of preventable long-term impairment.

By regulating, publicly reporting and periodically inspecting building air quality, similarly to how we oversee food safety in commercial kitchens, we can greatly reduce the spread of disease and reap huge benefits for everyone —especially children.

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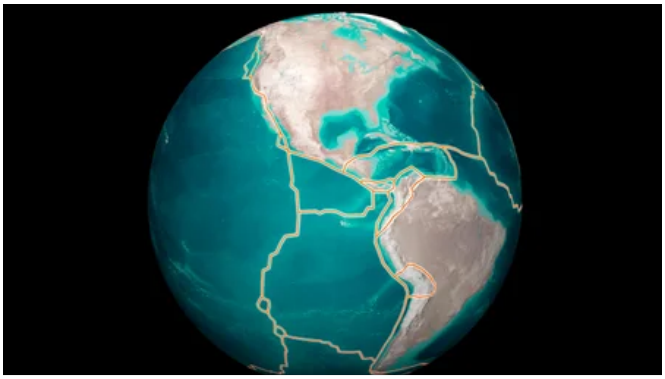

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